SCOPE OF WORK
AGREEMENT TO CONDUCT STUDIES TO INCLUDE:
GEOPHYSICAL STUDIES, TREATABILITY STUDIES, AND
GROUNDWATER CHARACTERIZATION STUDIES
AT THE STAUFFER CHEMICAL COMPANY SUPERFUND SITE
TARPON SPRINGS, PINELLAS COUNTY, FLORIDA

INTRODUCTION

The purpose of these Studies is to demonstrate that the remedy selected for the source control operable unit number (OU1) (hereinafter "the remedy" or "the selected remedy") will provide protectiveness of human health and the environment over the life of the remedy as required under 40 CFR Part 192. This Scope of Work (SOW) is designed to provide a framework for conducting the studies at this Site and is the "technical" portion of this Agreement. This SOW provides for a number of detailed documents which shall be used to guide each component of these studies at this Site. The Respondents will conduct the studies to determine the long-term effectiveness of the selected remedy and prepare a written report of their findings to be reviewed by the EPA. Note, that for the purposes of this Agreement and SOW, any reference to "long term," "long term effectiveness," "life of the remedy," pertain to the required life of the remedy required under 40 CFR Part 192.

The Respondents shall conduct these studies in accordance with this SOW and other guidances used by EPA in conducting these types of studies (a list of the primary guidances is attached), as well as any additional requirements in this Agreement. The Respondents shall furnish all necessary personnel, materials, and services needed, or incidental to, performing and completing the studies.

EPA shall provide oversight of the Respondents' activities throughout the studies. The Respondents shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the responsibility for conducting adequate studies shall lie with the Respondents. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be construed as a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondents shall submit for these studies is attached.

TASK I - SCOPING

Scoping is the initial planning process of these studies and has been initiated by EPA through this document to determine how these studies will be planned conducted, and the results reported. The specific project scope shall be planned by the Respondents and EPA. The Respondents shall document the specific scope of these studies as required in this scope of work. Because of the nature of the Site, additional data requirements may be identified throughout the execution of these studies. In any event, the Respondents are responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of the Agreement, including this SOW.

The Site Objectives for these studies to be conducted at the Site have been determined preliminarily, based on available information, to be the following:

1. Investigating the geology underlying the Site to determine if sinkholes are currently present, and to determine the likelihood that they will form over the required life of the remedy under all reasonably anticipated Site conditions.

2. Determining if the underlying geology can support the selected remedy over the long term
under all reasonably anticipated Site conditions.

3. Conducting treatability studies for the proposed in-situ solidification/stabilization remedy, both for quality control during its installation, and its ability to remain protective of human health and the environment over the life of the remedy under all reasonably anticipated Site conditions.

4. Determining the flow characteristics and contaminant concentrations in the surficial and Floridan aquifers only to the extent to determine their impacts on the long-term ability of the remedy to remain protective of human health and the environment.

5. Preparing a written report of the results of the studies and conclusions/recommendations pertaining to the long-term effectiveness of the selected remedy, based upon these results.

Specific tasks required to meet these objectives include but are not limited to:

l. Review of existing information pertaining to the Site. This review includes data collected under previous investigations and studies conducted at the Site, reports from local, State and Federal agencies, court records, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens. This will also include reviewing and incorporating data from the baseline groundwater monitoring report already developed by the Respondents for the FDEP.

2. Review of relevant guidance (see attached references) to understand the remedial process. This information shall be used in performing these Studies and preparing all deliverables under this SOW.

3. Conducting geophysical studies to determine the absence or presence of karst geology underlying the Site and to determining the ability of the underlying geology to support the proposed remedy over the life of the remedy as required under 40 CFR Part 192 under all reasonably anticipated Site conditions. Determining the presence of existing sinkholes beneath the Site and the probability that they will form over the required life of the remedy. The geophysical studies shall also be reviewed to evaluate the presence of any subsurface anomalies such as buried drums, storage tanks, or other potential sources of contamination that have not already been identified.

4. Expanding the monitoring well network in the carbonate zone and surficial aquifers as necessary to evaluate the impact of ground water on the effectiveness of the selected remedy.

5. Determining the extent of flow between the surficial and Floridan aquifers only to the extent that it impacts the effectiveness of the selected remedy. Determine the condition and extent of the intermittent semi-confining clay layer existing between the surficial and Floridan aquifers only to the extent that it impacts the effectiveness of the selected remedy.

6. Performing bench or pilot Treatability Studies to determine the long term effectiveness of the selected in-situ solidification/stabilization remedy under all reasonably anticipated Site conditions including but not limited to: salt water intrusion, contact with contaminants, the presence of elemental phosphorous, and groundwater characteristics.

7. Determining the impacts of groundwater characteristics on the ability of the subsurface geology and the in-situ solidification/stabilization remedy to remain protective of human health and the environment over the long term.

8. Establishing a "baseline" groundwater conditions in the surficial and Floridan aquifers for use in monitoring the performance of the selected remedy.

9. Commence demolition of existing structures pursuant to the June 2000 "Work Plan Demolition Project" ("Work Plan") previously submitted to and reviewed by EPA. The Respondents may commence preliminary demolition activities upon EPA approval of the Respondents' responses to previously received comments by EPA to the Work Plan. EPA agrees to provide its approval of, or additional comments to, the Respondents' responses within fourteen (14) days after they are submitted. The EPA retains the right to oversee all demolition activities. EPA and the Respondents recognize the uncertainties related to scheduling of demolition activities, and both agree to confer periodically and revise the demolition activity schedule as appropriate, so that stipulated penalties may be avoided.

10. Establishing criteria for evaluating the results of these studies and determining if based on the results, the selected remedy will be protective of human health and the environment over the long term.

Note: The purpose of the groundwater studies described in this order are to address groundwater only to the extent that it impacts the effectiveness of the selected remedy. Determination of the off-site extent of groundwater contamination, its impacts on the Anclote River, etc., will be performed under a separate order.

The Respondents must meet with EPA to discuss all significant project planning decisions and special concerns associated with the studies to be conducted at the Site. The following activities shall be performed by the Respondents as a function of the studies scoping process.

A. Site Background

The Respondents shall gather and analyze the existing information regarding the Site and to assist in planning the scope of the studies as follows:

1. Collect and Analyze Existing Data and Document the Need for Any Additional Data

Before planning the studies activities, all existing Site data shall be thoroughly compiled and reviewed by the Respondents. Specifically, this shall include the ROD, RI/FS, and other available data related to the Site. This information shall be utilized in determining the type and quantity of additional data is needed to complete these studies. Decisions on the necessary data and Data Quality Objectives (DQOs) shall be made by EPA.

TASK II - STUDIES

The studies shall be conducted to meet the Site objectives specified under this Agreement. The studies shall provide the basis for determining if the selected remedy will remain protective of human health and the environment over the required life of the remedy.

A. Studies Planning

At the conclusion of the project planning phase, the Respondents shall submit the following:

- Master Studies Work Plan
- Sampling and Analysis Plan,
- Geophysical Studies Plan
- Groundwater Studies Plan
- Health and Safety Plan, and
- Treatability Study Work Plan.

These plans must be reviewed and approved and the Health and Safety Plan reviewed by EPA prior to the initiation of field activities.

Upon approval of these work plans, the Respondents shall implement them in accordance with the EPA-approved schedule contained therein. Such implementation shall include EPA review and/or approval of submittals, and other deliverables. The purpose of these design reviews is for EPA to assess the ability of these studies to achieve the Site Objectives in accordance with this Agreement.

1. Master Studies Work Plan

This Master Studies Work Plan documenting the decisions and evaluations completed during the scoping process shall be submitted to EPA for review and approval. The Master Studies Work Plan shall address the Health and Safety Plan, the Sampling and Analysis Plan, the Groundwater Studies Plan, Geophysical Studies Plan, and the Treatability Study Work Plan and how they will be coordinated. The Work Plan shall include a general description of the additional data collection and evaluation activities to be performed under each study, the

reports to be prepared, and how the results of the individual studies will be coordinated. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included.

Specifically, the Master Studies Work Plan shall present the following:

a. A statement of the problem(s) and potential problem(s) posed by the Site and how the objectives of the studies will address the problem(s). The Work Plan shall specifically address the probability of sinkhole formation under the Site, the ability of the underlying geology to support the selected remedy, and the ability of the in-situ solidification/stabilization remedy to remain protective for the required duration of the remedy as specified in 40 CFR Part 192. Specific issues addressed shall include exposure to salt water, the presence of elemental phosphorous, groundwater contaminants, and groundwater flow characteristics.

b. A background summary setting forth the following:

   1) A brief description of the Site including the geographic location, and a description of the physiographic, hydrologic, geologic, demographic, ecological, cultural and natural resource features of the Site;

   2) A brief synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;

   3) A summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.

c. A brief list and detailed description of the tasks to be performed, information needed for each task, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA. This includes the deliverables set forth in the remainder of Task II.

d. A schedule with specific dates for completion of each required activity and submission of each deliverable required by this Agreement, including those in this SOW. This schedule shall also include information regarding timing, initiation and completion of all critical path milestones for each activity and/or deliverable.

e. A project management plan, including a data management plan, monthly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the Studies. The data management plan shall address the requirements for project management systems, including tracking, storing, and retrieving the data along with identifying software to be used, minimum data requirements, data format and backup data management. The plan shall address both data management and document control for all activities conducted during these studies.

f. A description of the community relations support activities to be conducted during the studies. The EPA has the lead responsibility for community relations. However, the Respondents shall perform the following community relations activities under the oversight of the EPA: 1) Participation in public meetings; 2) Assist in the preparation of Fact Sheets; and 3) Other activities as necessary to disseminate information to the community.

g. A description of any necessary Site preparation work which may include building demolition, relocation of utilities, clearing, grubbing, and grading.

h. A description of the methods to be used to assist EPA in making a final determination regarding whether or not the selected remedy will be protective. This may include a list of tests that must be conducted and criteria that must be met.

2. Health and Safety Plan

A Health and Safety Plan shall be prepared in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan shall include a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and Site control. Note that EPA does not "approve" the Respondents' Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

3. Sampling and Analysis Plan

The Respondents shall prepare a Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP shall consist of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The Field Sampling and Analysis Plan shall be written so that a field sampling team unfamiliar with the Site would be able to gather the samples and field information required. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan. In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.

The Respondents shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an approved QA program. The Respondents shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis. The Respondents shall submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a laboratory not in the CLP is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval.

4. Geophysical Studies Plan

The Respondents shall prepare a plan for evaluating the geology underlying the Site to evaluate its ability to support the selected remedy over the duration required under the 40 CFR Part 192. The plan shall discuss methods for determining, in relation to the effectiveness of the selected remedy, the location of sinkholes, the evaluation of areas where there are existing sinkholes, determining the probability that sinkholes will form over the life of the remedy, and their impact on the selected remedy. The study shall include a description of the methods and criteria to be used in determining the probability that sinkholes may form over the life of the remedy.

5. Groundwater Studies Plan

The Respondents shall prepare a plan for evaluating the groundwater characteristics in those aquifers, and the hydraulic communication between those aquifers under all reasonably anticipated Site conditions over the long term to the extent these groundwater issues impact the effectiveness of the selected remedy.

6. Treatability Study Work Plan

The Respondents shall prepare a Treatability Study Work Plan for EPA review and approval. This Plan shall describe the remedial technology to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for the Treatability Study shall be documented as well. If a pilot-scale Treatability Study is to be performed, the Treatability Study Work Plan shall also describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-Site, permitting requirements must be addressed. A schedule for performing the Treatability Studies shall be included with

specific dates for the tasks, including, but not limited to, the procurement of contractors and the completion of sample collection, performance, sample analysis, and report preparation. The plan shall include a description of the methods and decision criteria to be used in determining whether or not in-situ solidification/stabilization treatability results show that the selected in-situ solidification/stabilization remedy will be protective of human health and the environment under all reasonably anticipated Site conditions.

7. Treatability Study Sampling and Analysis Plan

If the SAP is not adequate for defining the activities to be performed during the Treatability Study, a separate Treatability Study SAP shall be prepared by the Respondents for EPA review and approval. It shall be designed to monitor pilot plant performance, as necessary.

8. Treatability Study Health and Safety Plan

If the Health and Safety Plan is not adequate for defining the activities to be performed during the Treatability Study, a separate Treatability Study Health and Safety Plan shall be developed by the Respondents. Note that EPA does not "approve" the Respondents' Treatability Study Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

B. Execution of the Studies

1. During this phase of the studies, the Master Studies Work Plan, SAP, Groundwater Studies Plan, Treatability Studies Work Plan, Geophysical Studies Plan and Health and Safety Plan shall be implemented. Field data and geophysical information shall be collected and analyzed to provide the information required to accomplish the objectives of the studies. The Respondents shall notify EPA at least two weeks in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, field lay out of any sampling or geophysical testing grid, excavation, sampling and analysis activities, and other field investigation activities. The Respondents shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. It may be necessary for the Respondents to supplement the work specified in the initial Work Plan. In addition to the deliverables below, the Respondents shall provide a monthly progress report and participate in meetings with EPA at major points in the Studies.

2. The Respondents shall analyze and evaluate the data to describe: (1) contaminant source characteristics; (2) groundwater contamination beneath the Site to the extent that it impacts the effectiveness of the selected remedy; (3) groundwater characteristics in the surficial and carbonate aquifers beneath the Site to the extent that it impacts the effectiveness of the selected remedy; and (4) geophysical characteristics of the geology underlying the Site to the extent that it impacts the effectiveness of the selected remedy.

The Respondents shall use the studies data to evaluate whether the selected remedy will remain protective of human health and the environment over the life of the remedy as required under 40 CFR Part 192. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use. The studies data shall be presented in a computer disk format utilizing Lotus 1-2-3 or other equivalent commonly used computer software. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAPP.

Data Management Procedures

The Respondents shall consistently document the quality and validity of field and laboratory data compiled during these studies. At a minimum, this documentation shall include the following activities:

Documenting Field Activities

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the Respondents in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the Work Plan and/or the SAP, the Geophysical Studies Plan, and the Groundwater Studies Plan. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for all samples split or duplicated with EPA, only to the extent specified in the SAP.

Maintaining Sample Management and Tracking

Analytical results developed under the Work Plan shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondents shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

C. Studies Reports

The Respondents shall prepare the reports set forth below. Reports for each individual study shall include a discussion of the data acquisition activities performed under that study along with all sampling/data collection results. Each report shall also summarize the results for that individual study.

Geophysical Studies and Groundwater Studies Report

The Respondents shall prepare and submit a draft report which characterizes the general geology underlying the Site and analyzes the ability of the geology to support the selected remedy over the long term, based upon the geophysical data and groundwater data collected, along with other pertinent information. This report shall summarize results of field activities for determining groundwater characteristics for both aquifers, as well as the communication between the aquifers to the extent such groundwater issues impact the effectiveness of the selected remedy. The report shall evaluate the impact on the selected remedy of any subsurface anomalies such as buried drums, storage tanks, or other potential sources of contamination that have not already been identified. The report shall address the impact, only with respect to the selected remedy, of the groundwater characteristics on the geology beneath the Site over time. Following comment by EPA, the Respondents shall prepare a final Geophysical Studies and Groundwater Studies Report which satisfactorily addresses EPA's comments.

Treatability Study Evaluation Report

Following completion of Treatability Studies, the Respondents shall analyze and interpret the testing results in a technical report to EPA. The report shall evaluate the in-situ solidification/stabilization technology's long-term effectiveness, implementability, cost, and actual results as compared with predicted results, for each mix design evaluated. The report shall also evaluate full-scale implementation of the technology, including a sensitivity analysis identifying the key parameters affecting quality control in a full-scale operation.

Final Studies Report

The Final Studies Report shall combine the results of the Geophysical Studies and Groundwater Studies Report, the Treatability Study Report and the general information provided from the Master Studies Workplan and shall be used as a final basis for determining the ability of the selected remedy to remain protective of human health and the environment over the life of the remedy as required by 40 CFR Part 192. The Respondents shall provide a draft Final Studies Report for EPA review and comments. The Respondents shall refer to the RI/FS Guidance for an outline of the report format and contents. Following comment by EPA, the Respondents shall prepare a Final Studies Report which satisfactorily addresses EPA's comments.

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RD/RA process:

1. "National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule", Federal Register 40 CFR Part 300, March 8, 1990.

2. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final", U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

3. "A Compendium of Superfund Field Operations Methods", Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

4. "EPA NEIC Policies and Procedures Manual", EPA-330/9-78-001-R, May 1978, revised November 1984.

5. "Data Quality Objectives for Remedial Response Activities", U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.

6. "Guidelines and Specifications for Preparing Quality Assurance Project Plans", U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.

7. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans", U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

8. "Users Guide to the EPA Contract Laboratory Program", U.S. EPA, Sample Management Office, August 1982.

9. “Environmental Investigations Standard Operating Procedures and Quality Assurance Manual,” U.S. EPA Region IV, May 1996

10. "USEPA Contract Laboratory Program Statement of Work for Organic Analysis", U.S. EPA, Office of Emergency and Remedial Response, February 1988.

11. "USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis", U.S. EPA, Office of Emergency and Remedial Response, July 1988.

12. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements", U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

13. "CERCLA Compliance with Other Laws Manual", Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.

14. "Guide for Conducting Treatability Studies Under CERCLA", U.S. EPA, Office of Emergency and Remedial Response, Pre-publication Version

15. "Health and Safety Requirements of Employees Employed in Field Activities", U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

16. "Standard Operating Safety Guides", U.S. EPA, Office of Emergency and Remedial Response, November 1984.

17. "Standards for General Industry", Federal Register 29 CFR Part 1910, Occupational Health and Safety Administration.

18. "Standards for the Construction Industry", Federal Register 29 CFR 1926, Occupational Health and Safety Administration.

19. "NIOSH Manual of Analytical Methods, 2d edition. Volumes I-VII, or the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.

20. "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities", National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.

21. "TLVs - Threshold Limit Values and Biological Exposure Indices for 1987-88", American Conference of Governmental Industrial Hygienists.

22. "American National Standards Practices for Respiratory Protection", American National Standards Institute Z88.2-1980, March 11, 1981.

23. "Procedures for Completion and Deletion of NPL Sites", U.S. EPA, Office of

Emergency and Remedial Response, April 1989, OSWER Directive No. 9320.2-3A.

24. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3.

SUMMARY OF THE MAJOR DELIVERABLES
AGREEMENT TO CONDUCT STUDIES TO INCLUDE: GEOPHYSICAL, TREATABILITY, AND GROUNDWATER CHARACTERIZATION
AT THE STAUFFER CHEMICAL/TARPON SPRINGS SUPERFUND SITE

	DELIVERABLE	EPA RESPONSE
TASK I	**SCOPING**	
	Technical Memorandum Documenting Any Revised Site Objectives (5)*	Review and Approve
TASK II	**STUDIES**	
	Master Studies Work Plan (15)	Review and Approve
	Sampling and Analysis Work Plan (15)	Review and Approve
	Geophysical Studies Work Plan (15)	Review and Approve
	Health and Safety Plan (5)	Review and Comment
	Groundwater Studies Work Plan (15)	Review and Comment
	Treatability Study Work Plan (15)	Review and Approve
	Treatability Study Sampling and Analysis Plan (15)	Review and Approve
	Treatability Study Health and Safety Plan (5)	Review and Comment
	Geophysical Studies and Groundwater Studies Report (15)	Review and Approve
	Treatability Studies Report (15)	Review and Approve
	Final Studies Report (15)	Review and Approve

* Number in parentheses indicates the number of copies to be submitted to the EPA.

ATTACHMENT C
GENERAL SCHEDULE FOR
STUDY ACTIVITIES
AT THE STAUFFER CHEMICAL COMPANY SUPERFUND SITE

ACTIVITY	SCHEDULE (DAYS)
Effective Date of Agreement	X
Geophysical Studies Subcontractor Selected	X+30
EPA Approval of Subcontractor	15 Days after Submission by Respondents
Draft Master Studies Workplan and Associated Documents Submitted	45 Days After Effective Date of Agreement
Draft Treatability Study Work Plan Submitted - In Situ S/S	120 Days After Effective Date of Agreement
Draft Geophysical Studies Work Plan Submitted	30 Days After EPA approval of Geophysical Studies Subcontractor
Draft Groundwater Studies Work Plan Submitted	60 Days After Effective Date of Agreement
Draft Sampling and Analysis Plan Submitted	60 Days after Effective Date of Agreement
Draft Health and Safety Plan Submitted	60 Days after Effective Date of Agreement
EPA Review	45 Days for all Studies
Final Master Studies Workplan and Associated Documents Submitted	30 Days After Receiving EPA Comments on Draft
Final Treatability Study Work Plan Submitted - In-Situ S/S	60 Days After Receiving EPA Comments on Draft
Final Geophysical Studies Work Plan Submitted	30 Days After Receiving EPA Comments on Draft
Final Groundwater Studies Work Plan Submitted	30 Days After Receiving EPA Comments on Draft
Final Sampling and Analysis Work Plan Submitted	30 Days After Receiving EPA Comments on Draft
EPA Approval	
Final Health and Safety Plan Submitted	30 Days After Receiving EPA Comments
Initiate Geophysical Studies Fieldwork	30 Days after EPA Approval on Final Geophysical Studies Work Plan unless otherwise agreed to in work plan

Geophysical Studies Fieldwork Completed	Duration to be established in Work Plan
Initiate Groundwater Studies Fieldwork	30 Days after EPA Approval of Final Groundwater Studies Work Plan unless otherwise agreed to in work plan
Groundwater Studies Fieldwork Completed	Duration to be established in Work Plan
Draft Geophysical Studies and Groundwater Studies Report Submitted	30 Days after completion of Geophysical Studies Field Work Groundwater Studies Field Work, and Laboratory Work, whichever comes later
EPA Review	45 Days
Final Geophysical Studies Report and Groundwater Studies Report	45 Days after Receipt of EPA Comments on Draft Geophysical Studies Report
Initiate In-Situ S/S Treatability Studies	30 days after Completion of Groundwater Studies Field Work
In-Situ S/S Treatability Studies Complete	Duration to be established in Work Plan
Draft Treatability Studies Report	30 Days after completion of studies
EPA Review	45 Days
Final Treatability Studies Report Submitted	30 Days after Receipt of EPA Comments on Draft Treatability Studies Report
Draft Final Studies Report Submitted	30 Days after either the Geophysical Studies, Groundwater Report, or the Treatability Studies Report is approved, whichever is latest unless otherwise agreed to in work plan
EPA Review	60 Days
Final Studies Report Submitted	30 Days after Receipt of EPA comments on Draft Additional Studies Report